

REMARKS

Claims 1-3 and 5-23 are pending in this application. By this Amendment, claims 1, 3, 9, 10, 14 and 20 are amended.

Claims 1 and 3 are objected to based on use of the term "absorb" as an equivalent term to "adsorb" and based on a typographical error in claim 3. Claim 3 has been amended to change the instance of "absorb" to recite "adsorbed." In addition, the typographical error in claim 3 has been corrected. Therefore, the claim objections should be reconsidered and withdrawn.

Claims 1, 3 and 14 are rejected under 35 U.S.C. §112, second paragraph. Claims 1 and 3, as well as claims 9 and 10, have been amended to delete the phrase "the reaction medium." Instead, these claims have been amended to consistently refer to a "sol." In addition, claim 14 has been amended to delete the objectionable "the." Therefore, the rejection under 35 U.S.C. §112, second paragraph, should be reconsidered and withdrawn.

Claim 14 has also been amended to insert the term "cationic." This amendment is merely for clarity and does not change the scope of claim 14 since claim 1 defines the functional monomer(s) (3) as being cationic.

Claims 3, 17 and 22 are rejected under 35 U.S.C. §102 over Hoffman et al. Applicants respectfully traverse the rejection.

Hoffman is directed to methods of delivering substances into, removing substances from, or reacting substances with a selected environment utilizing polymer gels or coatings exhibiting either an upper or lower critical solution temperature (LCST). In Hoffman, the substances may be physically or chemically immobilized within the polymer gels. See the Abstract. As polymers having an LCST, Hoffman teaches substantially hydrophobic polymers of N-substituted acrylamides or methacrylamides among others. Col. 4, lines 31-38.

Hoffman does not teach an isolation process utilizing an adsorption reagent comprising a sol having an aqueous continuous phase and a discontinuous phase of a particulate support, as recited in claim 3. Instead, in Hoffman, the polymer forms a gel, not a particulate discontinuous phase in an aqueous phase. In addition, contrary to the allegations in the Office Action, Hoffman does not teach: (1) a copolymer of an acrylamide with a cationic functional monomer, (2) utilizing a pH at most equal to 7, or (3) utilizing an ionic strength at most equal to 10^{-2} M. In particular, Example VII, which is relied upon in the Office Action, does not specify any pH or ionic strength value.

For at least these reasons, Hoffman does not teach each and every feature of claim 3 or of claims 17 and 22, which depend from claim 3. Therefore, the rejection of these claims under 35 U.S.C. §102 should be reconsidered and withdrawn.

Claims 1-3, 5, 6, 9, 11-17, 19 and 21-23 are rejected under 35 U.S.C. §103 over Hoffman in view of Hooper et al. and Ponticello et al. Applicants respectfully traverse the rejection.

As discussed above, Hoffman does not teach, nor does it suggest, an isolation process utilizing an adsorption reagent comprising a sol having an aqueous continuous phase and a discontinuous phase of a particulate support. In addition, Hoffman does not teach or suggest: (1) a copolymer of an acrylamide with a cationic functional monomer, (2) utilizing a pH at most equal to 7, or (3) utilizing an ionic strength at most equal to 10^{-2} M.

Hooper is directed to sieving media for electrophoretic separation, not to immobilizing the substances within a gel for delivery or removal, as described in Hoffman. Thus, one of ordinary skill in the art would not look to Hooper to determine ways to modify Hoffman. Therefore, it is not proper to combine the teachings of Hoffman with Hooper. Furthermore, Hooper does not overcome the deficiencies of Hoffman. In particular, Hooper does not teach or suggest: (1) a copolymer of an acrylamide with a cationic functional monomer, (2) utilizing a pH at most equal to 7, or (3) utilizing an ionic strength at most equal

to 10^{-2} M. In addition, contrary to the allegations raised in the Office Action, Hooper does not teach or suggest varying the pH and the ionic strength to adsorb nucleic material. Instead, Hooper teaches varying the pH and the ionic strength in order to obtain an optimal loading of gel particles in suspension to improve the sieving action, a concern that is clearly not relevant to the teachings of Hoffman.

For at least these reasons, Hoffman and Hooper cannot properly be combined and, even if improperly combined, do not teach or suggest all of the features of independent claims 1 and 3. Furthermore, Ponticello does not overcome the deficiencies of Hoffman and/or Hooper. Therefore, the §103 rejection over these references should be reconsidered and withdrawn.

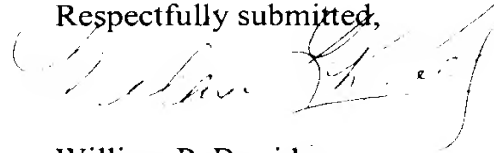
Claims 1-3, 5-9, 11-17, 19 and 21-23 are rejected under 35 U.S.C. §103 over Hoffman in view of Hooper and Ponticello and further in view of Kausch et al. Claims 1-3, 5-17, 19 and 21-23 are rejected under 35 U.S.C. §103 over Hoffman, Hooper, Ponticello and Kausch, and further in view Monji et al. Claims 1-3, 5-19 and 21-23 are rejected under 35 U.S.C. §103 over Hoffman, Hooper, Ponticello, Kausch and Monji, and further in view of Hiroshi et al. and Yoshioka et al. Claims 1-3 and 5-23 are rejected under 35 U.S.C. §103 over Hoffman, Hooper, Ponticello, Kausch, Monji, Hiroshi and Yoshioka, and further in view of Sasaki et al. Applicants respectfully traverse the rejections.

Hoffman, Hooper and Ponticello fail to teach or suggest the invention of independent claims 1 and 3 for at least reasons discussed above. None of Kausch, Monji, Hiroshi, Yoshika and Sasaki overcome the deficiencies of Hoffman, Hooper and Ponticello. Therefore, the §103 rejections over these references should be reconsidered and withdrawn.

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-3 and 5-23 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,



William P. Berridge
Registration No. 30,024

Melanie L. Mealy
Registration No. 40,085

WPB:MLM/jam

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OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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